

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

COPY TO O. &amp; C.

30-025-25592  
5. LEASE DESIGNATION AND SERIAL NO.

NM-14791

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

New Mexico Federal ~~FE~~ Comm.

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Undesignated (D)

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

Sec. 5, T-21-S, R-32-E

12. COUNTY OR PARISH

13. STATE

Lea

N. M.

## 1a. TYPE OF WORK

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☐GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Cleary Petroleum Corporation

## 3. ADDRESS OF OPERATOR

P. O. Drawer 2358, Midland, Texas 79702

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

3300' FSL &amp; 1980' FWL

At proposed prod. zone

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

5 miles SE of Halfway, New Mexico

## 15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

660' to lease line  
660' to unit line

## 18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

2640'

## 16. NO. OF ACRES IN LEASE

2282.84

## 19. PROPOSED DEPTH

14,000'

## 17. NO. OF ACRES ASSIGNED TO THIS WELL

320

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3668' GR

## 22. APPROX. DATE WORK WILL START\*

7-15-77

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5#	470'	650 (circulate)
12 1/4"	9 5/8"	43.5 & 40#	5200'	2335 (circulate - 2 stages)
7 7/8"	5 1/2"	17 & 20#	14000'	875

See attached sheet for casing and cementing programs. The well will be drilled to a depth of 14,000' to test the Morrow Sands. Dual 1500 series ram type blowout preventers and one Hydril will be used.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

## 24.

SIGNED

*Douglas W. Rice*

TITLE

Asst. Dist. Prod. Mgr.

DATE

6-14-77

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

**RECEIVED**

**JUL X 5 1972**

**OIL CONSERVATION COMM.  
HOBBS, N. M.**

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

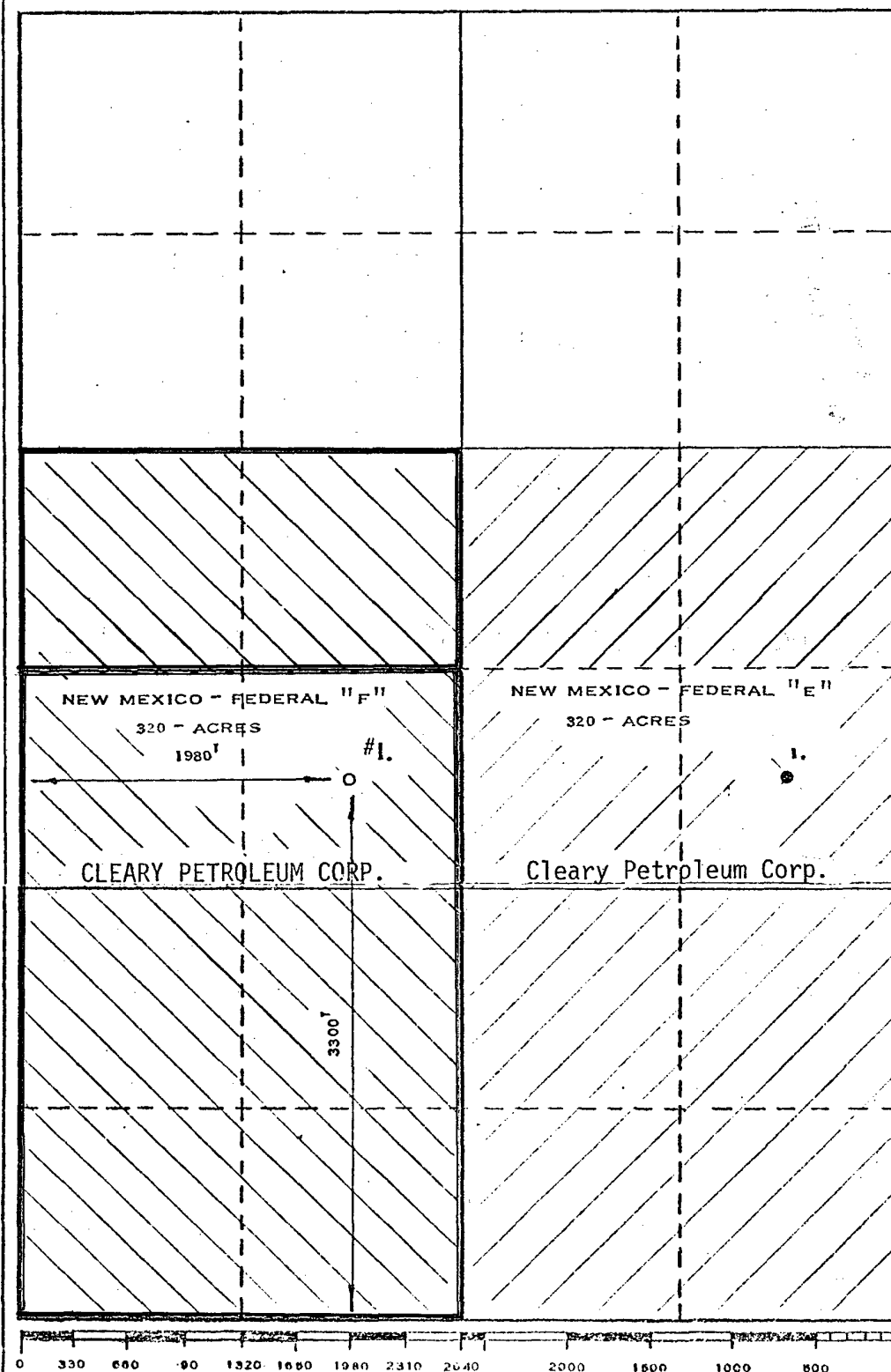
Operator <b>CLEARY PETROLEUM CORP.</b>		Lease <b>NEW MEXICO-FEDERAL "F"</b>		Well No. <b>I</b>
Unit Letter <b>"N"</b>	Section <b>5</b>	Township <b>21-S</b>	Range <b>32-E</b>	County <b>LEA</b>
Actual Footage Location of Well: <b>3300</b> feet from the <b>SOUTH</b> line and <b>1980</b> feet from the <b>WEST</b> line				
Ground Level Elev. <b>3668</b>	Producing Formation <b>MORROW</b>	Pool <b>UNDESIGNATED</b>	Dedicated Acreage: <b>320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☒ No If answer is "yes," type of consolidation COMMUNITIZATION IN PROGRESS

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) See Below

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Douglas W. Rice*  
Name

Assistant Dist. Prod. Mgr.  
Position

Cleary Petroleum Corp.  
Company

June 14, 1977  
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed  
JUNE 8, 1977

Registered Professional Engineer and/or Land Surveyor  
*Max A. Schumann Jr.*  
MAX A SCHUMANN JR

Certificate No.  
1510

- ☐ Bass Enterprises Prod. Co.  
Lease 80 acres (Lots 11 & 12  
WI: Bass Enterprises 75%  
Perry R. Bass -  
Individually 25%  
Royalty: 12½% U.S. Gov't.  
½% Muse  
5% Lomas
- ☐ Cleary Petroleum Corp. Lease  
240 acres (Lots 13 & 14 &  
SW/4 Sec. 5)  
WI: Cleary Pet. Corp. 75%  
Supron Energy Corp. 25%  
Royalty: 12½% U.S. Gov't.  
2½% C. E. Strange  
2½% H. Bartaman

RECEIVED

JUN 14 1977

U. S. GEOLOGICAL SURVEY  
HOBBS, NEW MEXICO

RECEIVED

JUL X 5 1977

OIL CONSERVATION COMM.  
HOBBS, N. M.

CLEARY PETROLEUM CORPORATION

MIDLAND DISTRICT  
June 1, 1977

DRILLING PROGRAM

WELL: Cleary Petroleum Corporation  
New Mexico Federal "F" No. 1  
3300' FSL and 1980' FWL  
Section 5, T-21-S, R-32-E  
Lea County, New Mexico

ELEVATION:

SURFACE FORMATION: Quaternary alluvium and bolson deposits.

ESTIMATED FORMATION TOPS:

<u>Formation</u>	<u>Estimated Depths</u>	<u>Remarks</u>
B/Red Bed/Top Anhydrite	1350'	No show
Yates	3300'	No show
Capitan Reef	3400'	Prob. water
Del. Mtn. Sands	5200'	Prob. water
Bone Spring	8450'	Prob. water
Wolfcamp	10850'	Poss. show oil or gas
Strawn	12400'	Poss. show/oil
Atoka Sand	12700'	Poss. show/gas
Atoka Carbonates	12900'	No show
Morrow Upper Sands	13550-13750'	Prod. gas
Morrow Lower Sands	13850-T.D.	Prod. gas
Total Depth	14000'	

ESTIMATED DRILLING TIME: 55 days

Samples: 10' samples 3000' to total depth.

Drilling Time Record: Geologist-Surface to T.D. Hand kept drilling time as directed by geologist.

Coring: None

Testing: None anticipated dependent upon shows above main producing horizon (Morrow Sands).

Logging: Run #1 - Surface to thru Salado Formation 0'-3500'  
GR-Acoustic-Caliper.  
Run #2 - Base Intermediate to T. D.  
GR-Acoustic Neutron, Guard, Forxo  
Welex Logging Co.

Similar Well: Cleary Petroleum No. 1 New Mexico Federal "E"

Known Drilling Hazard in Area: Possible lost circulation in Capitan Reef 3600-4400'.  
Possible high pressure in Atoka Sand.

Oil or Gas Shows: If any indications are noted and geologist not at well site, please call:

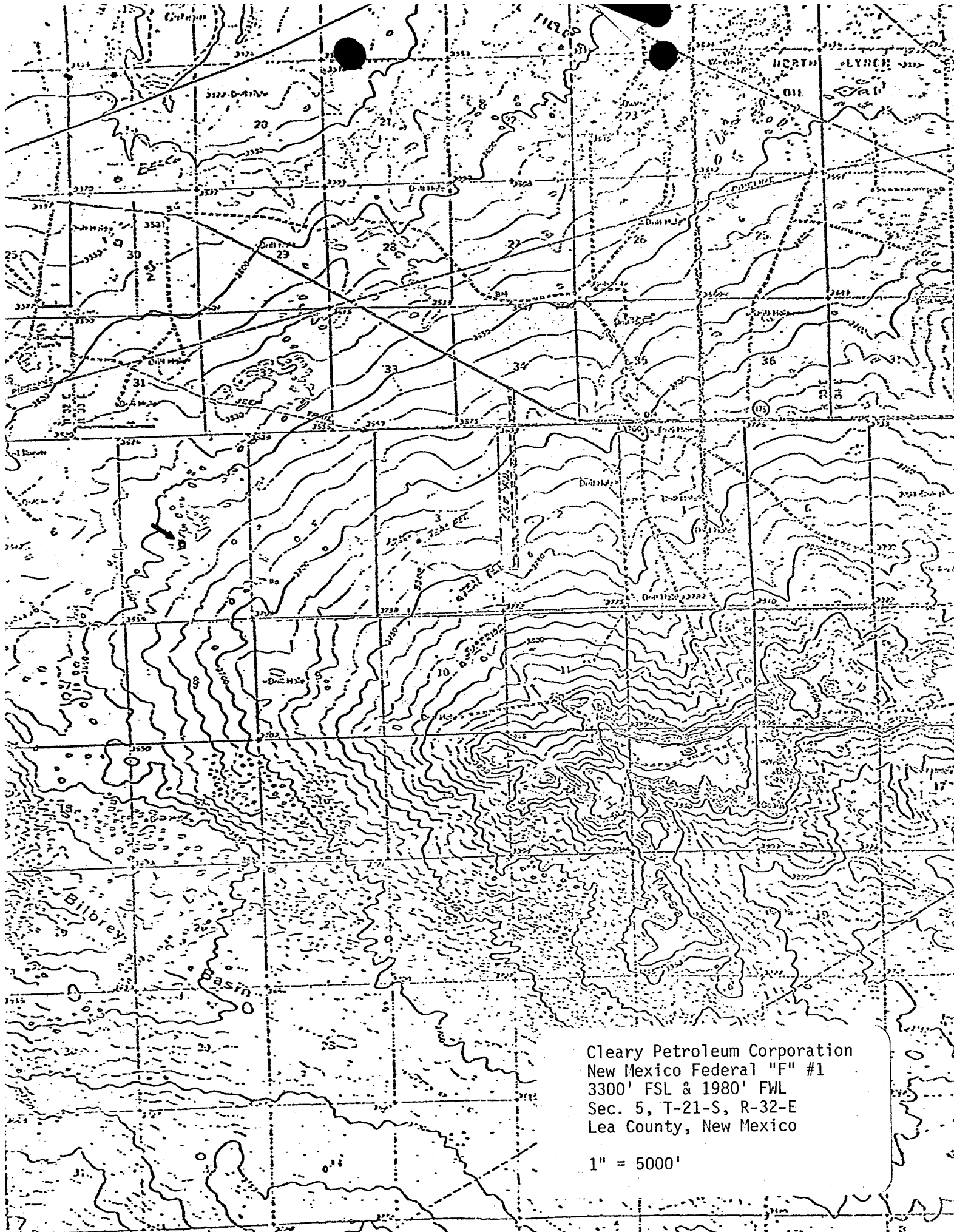
W.J. "Bill" Henry Ofc. 915-682-4484  
Home 915-694-4520

or

Cleary Petroleum Corp. Ofc. 915-683-4793  
Doug Rice Home 915-684-4724

Consulting Geologist: William J. Henry  
William J. Henry

District Manager: Max E. Douglas  
Max E. Douglas Cleary Petroleum Corporation  
Ofc. 915-683-4793  
Home 915-682-9675



Cleary Petroleum Corporation  
New Mexico Federal "F" #1  
3300' FSL & 1980' FWL  
Sec. 5, T-21-S, R-32-E  
Lea County, New Mexico

1" = 5000'

RECEIVED

JUL 15 1977

OIL CONSERVATION COMM.  
HOBBS, N. M.

CLEARY PETROLEUM CORPORATION  
NEW MEXICO FEDERAL "F" COMM. #1  
LEA COUNTY, NEW MEXICO

CASING & CEMENTING PROGRAM

Surface Casing:

17½" hole size; set approximately 470' of 13 3/8, 54.5 # K-55 new casing using 350 sx of Class "C" cmt. containing 4% gel, 2% Calcium Chloride with ¼# flocele per sk, tail in with 300 sx Class "C" cmt containing 2% Calcium Chloride with ¼# flocele per sk.

Intermediate Casing:

12¼" hole size; set approximately 5200' 9 5/8" 40#, K-55, 8R LT & C & 43.5, N-80 LT & C new casing, cmt to surface using DV Multiple Stage tool at approximately 3100'. The first stage cmt will consist of 400 sx of Halliburton Light cmt containing 5# of Gilsonite & ¼# flocele per sk., tail in with 300 sx of Class "C" containing 2% Calcium Chloride & ¼# flocele per sk. The second stage cmt will consist of 1525 sx Halliburton Light cmt containing 13½# salt and ¼# flocele per sk. tail in with 100 sx Class "C" cmt containing 2% Calcium Chloride & ¼# flocele per sk.

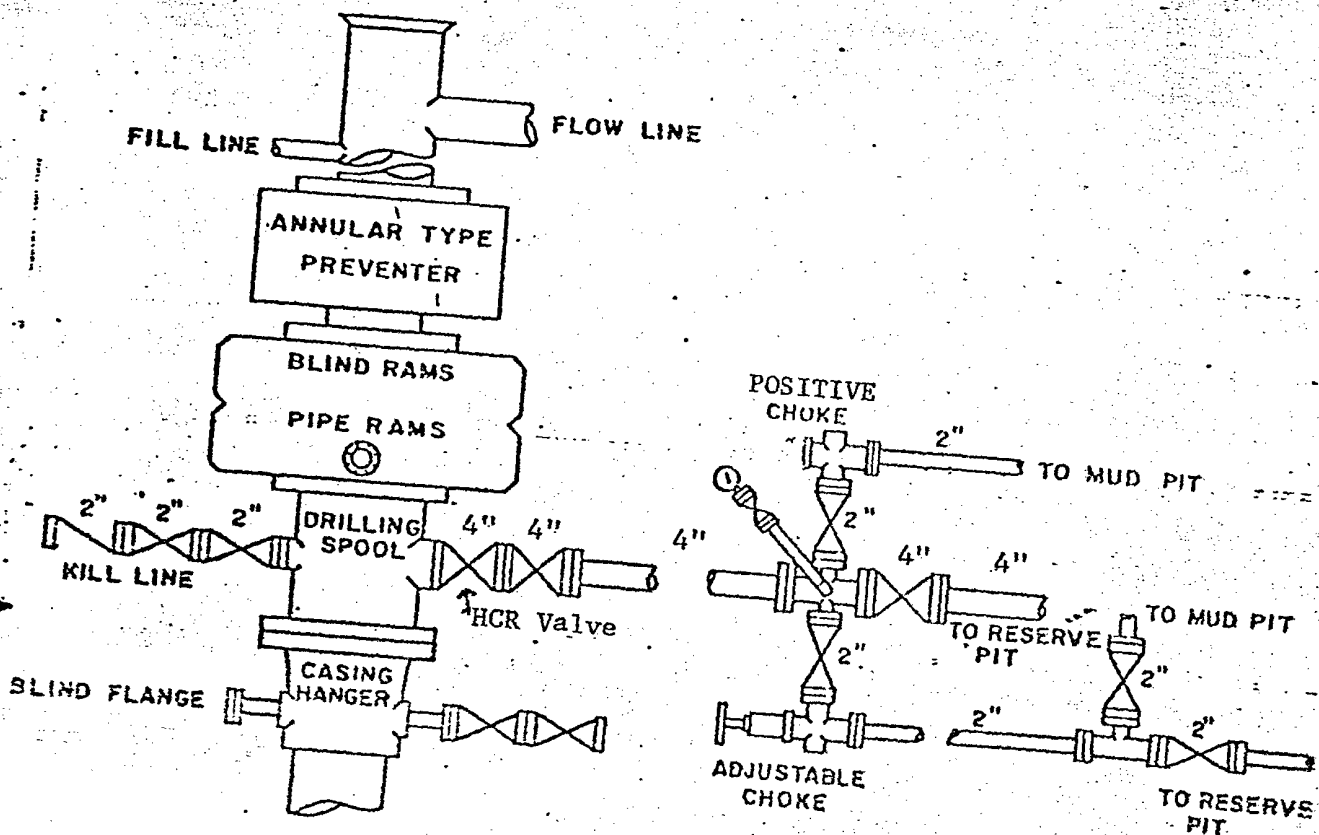
Production String:

7 7/8" hole size: set 5½" 20# & 17# N-80 LT & C & 17# N-80 buttress from 14,000' to surface. Cmt with 350 sx Halliburton Light cmt containing 0.6% Halad 22, 5# Gilsonite & ¼# flocele, tail in with 525 sx of Class "H" containing 0.8% Halad-22, 0.4% CFR-2, 3# KCL & ¼# flocele/sk. All 5½" casing will be new.



3000 lb. WP BOP  
 12" Shaffer Type B Hydraulic BOP 3000 PSI  
 12" GK Hydril 3000 WP  
 160 Gallon - 7 Station Koomey Accumulator with Remote Control  
 5000 lb. WP Choke Manifold  
 10" Type U Cameron 5000 WP, Double BOP

RIG #1



ATTACHMENT III

CLEARY PETROLEUM CORPORATION  
NEW MEXICO FEDERAL "E" #1  
LEA COUNTY, NEW MEXICO

RECOMMENDED DRILLING FLUID PROGRAM

Depth ft	Mud Weight ppg	Viscosity sec/qt	API Filtrate ml			
0' - 470'	8.5-9.0	35-42	NC	Spud with Drilling Gel and Lime maintaining as needed to set 13-3/8 pipe.		
470' - 5600'	8.5-10.0	32-34	NC	Drill out with fresh water letting native viscosity increase to 32 to 34 sec/qt. Around 1600', add 10 ppg brine water for salt stringers. Add and maintain 3% to 5% oil. Use Paper for seepage.		
5600' - 11000'	8.5-8.8	28-30	NC	Drill with fresh water, adding Lime for pH and Paper for seepage. Use Visbestos sweeps for hole cleaning.		
11000' - 14000'	10.0-10.2	30-34	Below 10	Displace with 10.0 ppg brine maintaining pH with Caustic Soda. At 13500', mud up with KCL, Drispac, Starch, and Soda Ash to produce the above properties. Adjust the mud weights and viscosities as hole conditions warrant.		

RATED DEPTH 10,000' - 13,500'

RIG #1

DRAWWORKS:

Brewster N-75 grooved drum for 1 1/4" line, 40" DRC hydromatic brake, 2 Foster Catheads, Bear automatic driller

ENGINE AND DRIVE GROUP

3-Waukesha F-3520 gas butane engines, rated at 550 HP each, 3 engine Brewster inline compound

PUMPS AND MUD SYSTEM:

2-1,000HP PZ-9 Gardener Denver triplex pumps w/forged steel fluid ends, compound driven pump suctions charged with 5x6 Mission centrifugal pump

3-Mud pits, 900 bbl. total w/low pressure mud system, w/60 HP electric motor 5x6 Mission centrifugal pump

1-Swaco 4 Clone 8" desander, powered by Waukesha 195 GLBU gas engine and Mission 5x6 centrifugal pump

1-Link Belt Vibrating Shale Shaker

DERRICK:

Lee C. Moore 133', 760,000# nominal capacity-racking capacity 14,000' of 4 1/2" drillpipe

SUBSTRUCTURE:

Lee C. Moore 16', 650,000# casing capacity, set back of 350,000#

ROTARY:

Brewster RSH 22" rotary table w/split and solid bushings

BLOCKS:

Brewster 5 sheave traveling block (400 ton capacity)

HOOK:

1 - Bryon Jackson 4300 super triplex (350ton)

SWIVEL:

Brewster 8 SX swivel (400 ton capacity)

OTHER EQUIPMENT:

12,000' of 4 1/2" Grade E 16.60 drillpipe

Drill Collars - 6", 7", 8", 9 1/2" as required for standard size hole

1-OMSCO Kelly Cock, 10,000 P.S.I.

1-Hydril 12"--900 GK Hydraulic Stripper type BOP

1-Cameron type U, double, 1500 series ram type blow-out preventor

1-4", 1500 series, 5,000# WP choke manifold w/5,000# HCR Cameron valve

160 gallon Koomey Accumulator 7-station w/remote control stand

2-500 bbl. horizontal water tanks

1-175 KW-AC 3 phase light plant, powered by GK Waukesha

1-35 KW-AC 3 phase light plant, powered by Hercules gas engine

2-way radio communications

1-Modern air conditioned trailer house

Fully equipped with vapor-proof lighting

## MULTI-POINT SURFACE USE AND OPERATIONS PLAN

CLEARY PETROLEUM CORPORATION  
NEW MEXICO FEDERAL "F" COMM. #1  
3330' FSL and 1980' FWL, Sec. 5, T-21-S, R-32-E  
LEA COUNTY, NEW MEXICO  
LEASE NEW MEXICO 14791

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

### 1. EXISTING ROADS

- A. Exhibit "A" is a portion of a highway map showing the location of the proposed well as staked. Five miles southeast of Halfway, New Mexico, and 34 miles northwest of Eunice, New Mexico on State Highway 176. A caliche road goes south from Highway 176 for 1.3 miles, right 0.8 mile to New Mexico Federal "B" #1, plus 1.5 miles. Road will be extended 0.5 mile to proposed wellsite.
- B. Exhibit "B" is a plat showing all existing roads within a one mile radius of the wellsite, and the planned access road.
- C. Entry and exit to the proposed location will be from State Highway 176 south past Pubco Federal Well No. 1, next right to New Mexico Federal "B" #1 plus 1.5 miles to New Mexico Federal "E" Comm. #1 (now drilling), and additional 0.5 mile over new caliche road.

### 2. PLANNED ACCESS ROADS:

- A. Length and Width: New road required will be 12 feet wide and 2640' feet long to connect to existing lease road to east. This new road is labeled and color coded red on Exhibit "B". The Center line of the proposed new road from the beginning to the wellsite, has been staked and flagged with the stakes being visible from any one to the next.
- B. Surfacing Material: Six inches of caliche, water, compacted, and graded.

- C. MAXIMUM GRADE: 3 percent.
  - D. Turnouts: One passing turnout will be constructed approximately 1300' east of proposed location. The construction for this passing turnout will increase the width of the new road to 20 feet for a distance of 30 feet. Cleary's New Mexico Federal "E" Comm. #1 is in progress (2640' East of proposed location).
  - E. Drainage Design: New road will have a drop of 6 inches from center line on each side.
  - F. Culverts: None required.
  - G. Cuts and fills: None required.
  - H. Gates, Cattleguards: An additional cattleguard will be required approximately 660' east of proposed location.
3. LOCATION OF EXISTING WELLS:
- A. Existing wells within a one-mile radius are shown on Exhibit "B".
4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:
- A. Location of the proposed tank battery production unit and flow line from New Mexico Federal "F" No. 1 are shown on Exhibit "C". If well produces salt water it will be collected in a 210 barrel fiberglass tank by the production unit. It will be hauled to disposal to Laguna Gatuna Salt Lake. The flow line will not be buried. A Hi-Lo safety valve will be installed on the wellhead to shut in the well in the event of a line failure.
  - B. If the proposed well is completed for production, the tank battery, production unit, and flow line will be located on the well pad, and no additional surface disturbance will occur. (As shown on Exhibit "C")
5. LOCATION AND TYPE OF WATER SUPPLY:
- A. There is no adequate water supply in the area for drilling. Water will be purchased and trucked to the wellsite over the existing and proposed roads shown on Exhibit "A" and "C".

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Caliche for surfacing the road and the well pad will be obtained from an existing pit in Lot 3 of Sec. 4, T-21-S, R-32-E. The pit is approximately 700 feet north of New Mexico Federal No. 1 well, operated by Cleary Petroleum Corporation. The pit is on land owned by The Bureau of Land Management. Location of the pit is shown on Exhibit "B". Royalty will be paid to The Bureau of Land Management by the road and location construction company.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. Trash, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pits are shown on Exhibit "D".
- F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

- A. None required.

9. WELLSITE LAYOUT:

- A. Exhibit "D" shows the relative location and dimensions of the well pad, mud pits, reserve pit, trash pits and location of major rig components.

- B. Only minor levelling of the wellsite will be required. No significant cuts and fills will be necessary.
- C. The reserve pit will be plastic lined.
- D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until all are filled.
- C. After abandonment of the well, surface restoration will be in accordance with The Bureau of Land Management requirements. Pits will be filled and location will be cleaned. The pit area, well pad, and all unneeded access road will be ripped to promote revegetation. Rehabilitation should be accomplished within 90 days after abandonment. Any special rehabilitation and/or revegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible. All pits should be filled and levelled within 90 days after abandonment.

11. OTHER INFORMATION:

- A. Topography: Land surface is gently sloping to the northwest. From the wellsite, the land surface slopes gently to the northwest at about 50 feet per mile.
- B. Soil: Soil is a deep fine sand underlain by caliche.
- C. Flora and Fauna: The vegetative cover is generally sparse and consists of mesquite, yucca, shinnery oak, sandsage and perennial native range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove, quail, and an occasional antelope.

- D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.
- E. Residences and Other Structures: The nearest occupied dwelling is a ranch house 2 miles northwest of the wellsite.
- F. Archaeological, Historical and Cultural Sites: None observed in the area.
- G. Land Use: Grazing and hunting in season.
- H. Surface Ownership: Wellsite and new roads are on Federal surface.

12. OPERATOR'S REPRESENTATIVE:

The field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

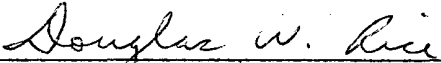
M. E. Douglas  
District Manager  
P. O. Drawer 2358  
Midland, Texas 79702  
Office Phone: 915-683-4793  
Home Phone: 915-682-9675

Douglas W. Rice  
Asst. District Production Manager  
P. O. Drawer 2358  
Midland, Texas 79702  
Office Phone: 915-683-4793  
Home Phone: 915-684-4724

13. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated with the operations proposed herein will be performed by Cleary Petroleum Corporation and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

June 9, 1977

  
Douglas W. Rice  
Assistant District Production Manager



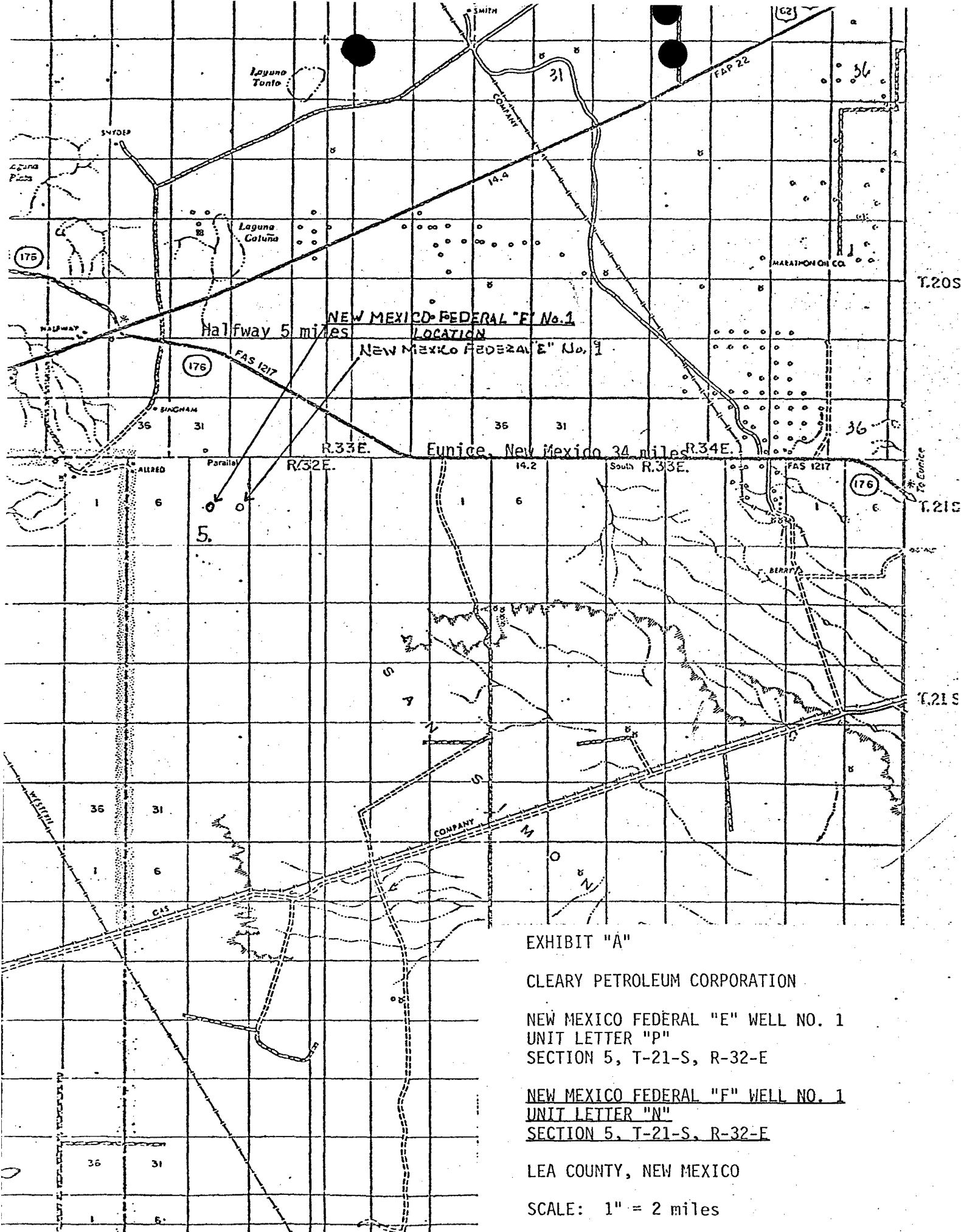


EXHIBIT "A"

CLEARY PETROLEUM CORPORATION

NEW MEXICO FEDERAL "E" WELL NO. 1  
UNIT LETTER "P"  
SECTION 5, T-21-S, R-32-E

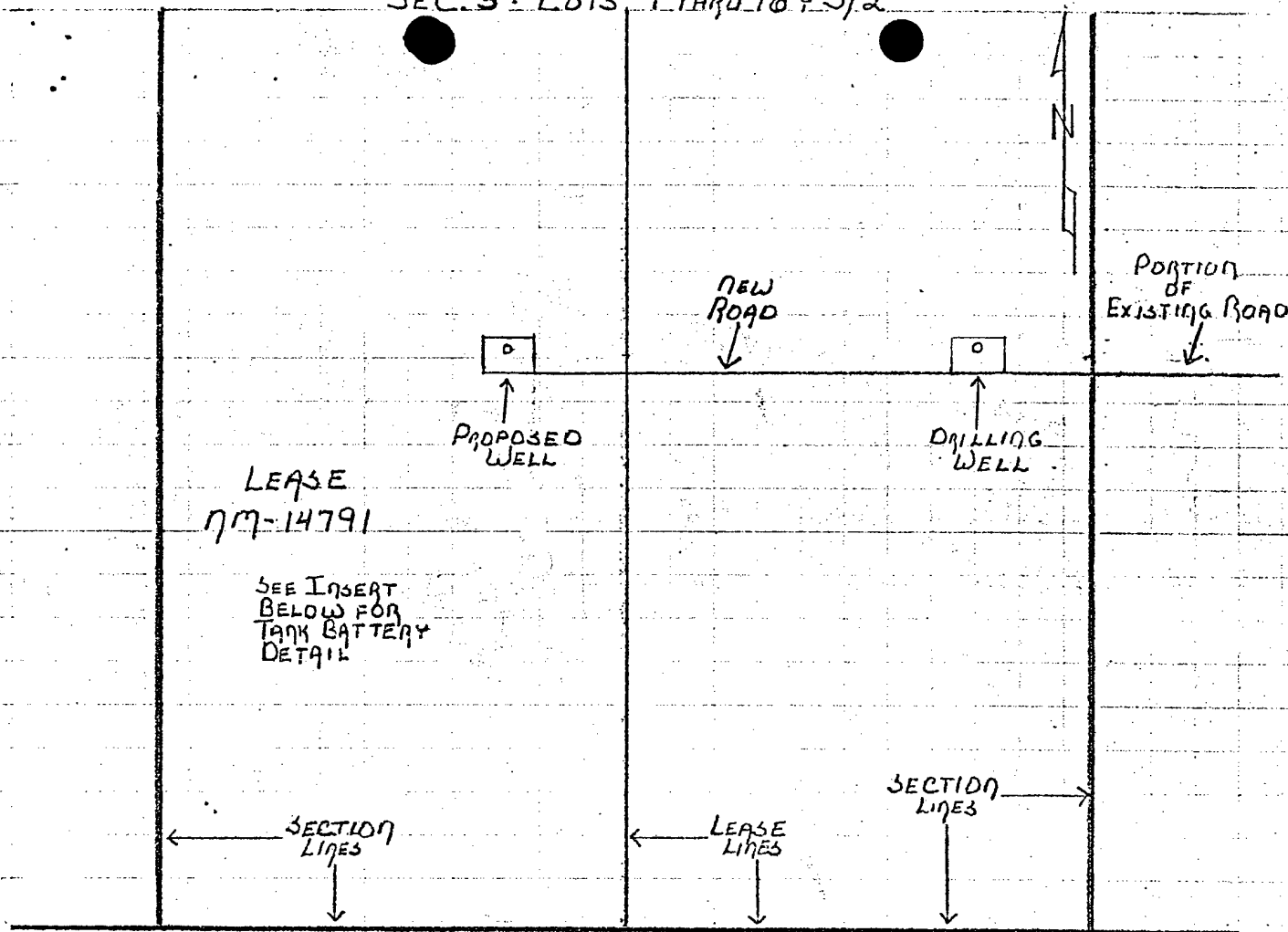
NEW MEXICO FEDERAL "F" WELL NO. 1  
UNIT LETTER "N"  
SECTION 5, T-21-S, R-32-E

LEA COUNTY, NEW MEXICO

SCALE: 1" = 2 miles

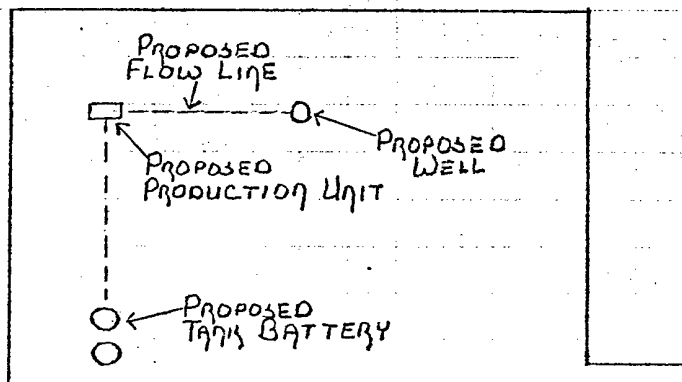


SEC. 5: LOTS 9 THRU 16 3/4



SCALE: 1" = 1000'

### DETAIL OF TANK BATTERY



SCALE: 1" = 100'

EXHIBIT "C"

CLEARY PETROLEUM CORPORATION  
NEW MEXICO FEDERAL "F" #1  
3300' FSL & 1980' FWL  
Section 5, T-21-S, R-32-E  
Lea County, New Mexico

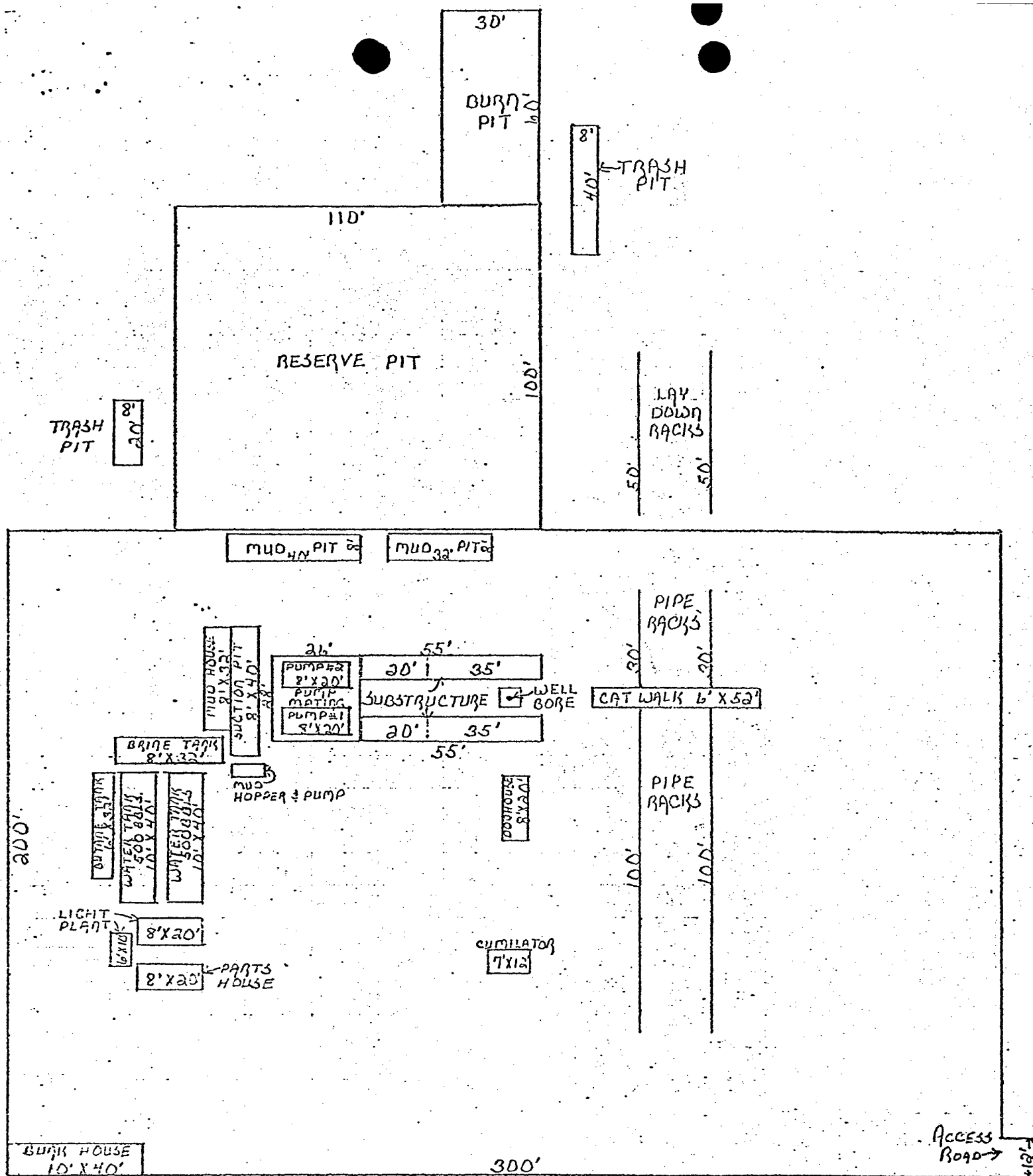


EXHIBIT "D"

RIG LAYOUT  
CLEARY PETROLEUM CORPORATION  
NEW MEXICO FEDERAL "F"

Scale: 1" = 40'

U. S. Geological Survey

HOBBS DISTRICT

Cleary Petroleum Corporation  
No. 1 New Mexico Federal "F" Com.  
Lot 14 Sec. 5-21S-32E  
Lea County, New Mexico

Above Data Required on Well Sign

CONDITIONS OF APPROVAL

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Drilling Operations on Federal Oil and Gas Leases, dated January 1, 1977.
2. Notify this office (telephone (505) 393-3612) when the well is to be spudded and in sufficient time for a representative to witness all cementing operations. Attached are names and telephone numbers of Geological Survey and Bureau of Land Management personnel who are available for consultation during construction, drilling, completion, and rehabilitation activities.
3. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life.
4. Secure prior approval of the District Engineer for variance from the approved drilling program and before commencing plugging operations, plug-back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely.
5. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.
6. All pits found to contain toxic liquids will be fenced and covered with a fine mesh netting for the protection of wildlife as directed by the responsible BLM representative.
7. In the event the oil or gas test results in a dry hole, the drill pad and access road will be ripped in accordance with "BLM Roswell Districts' Ripping Recommendations for Caliche or Compacted Drill Pads and Access Roads" (3109).
8. All structures and pipelines above ground, not subject to applicable conservation and safety requirements, should be painted a non-glare, non-reflective, non-chalking color that simulates the natural colors of the site. The Federal Standard Number to be used is Fed. Stand. 595, Color 30318.

GENERAL REQUIREMENTS FOR DRILLING OPERATIONS  
ON FEDERAL OIL AND GAS LEASES  
HOBBS DISTRICT

1. GENERAL:

- A. Full-compliance with applicable laws and regulations, with the approved Permit to Drill, and with the approved Surface Use and Operations Plan is required. Lessee's and/or operators are fully accountable for the actions of their contractors and subcontractors.
- B. Each drilling well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease name or unit name, well number, location of the well, and the lease serial number.
- C. A complete copy of the approved Application for Permit to Drill and the accompanying Surface Use and Operations Plan along with any conditions of approval shall be available to authorized personnel at the drillsite whenever active construction or drilling-operations are underway.
- D. No construction activities, such as roads, well sites, tank battery sites, pits, or other work involving significant surface disturbance will be commenced without prior approval.
- E. If, during operations, any archeological or historical sites, or any object of antiquity subject to the Antiquities Act of June 8, 1906, are discovered, all operations which would affect such sites are to be suspended and the discovery reported promptly to this office and the appropriate office of the Bureau of Land Management.
- F. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation, and appearance. All waste associated with the drilling operations will be contained and will be buried in place (in a separate trash pit) or removed and deposited in an approved sanitary landfill. All garbage (metal containers will be crushed) and debris left on site will be buried at least two feet deep. All trash and debris will be buried or removed from the site within one month after removal of the drilling rig and/or completion rig, and the wellsite will be kept clean and in an aesthetically satisfactory condition for the life of the well.

2. CONSTRUCTION ACTIVITIES:

- A. Caliche, gravel, or other related minerals, for use in construction of roads, well sites, etc., shall be obtained from existing, authorized pits unless approval is obtained to open a new pit.
- B. Materials removed during construction must be disposed of in such manner that it does not detract from the aesthetics of the area and does not accelerate erosion. Vegetation removed during clearing operations should

be placed in drainages, washes, gullies, etc., and "walked down" by crawler type tractor. If there are no drainages in the immediate area, the vegetation should be "walked down" in place. All trash resulting from construction activities will be disposed of. Any large rocks resulting from construction activities will not be piled or left in rows but will be left so they do not detract from the scenic attributes of the area. Any available topsoil encountered during construction should be stockpiled for use in restoring the pit area after the pits are covered.

- C. All access roads should be limited to 12 feet in width. If the well is a producer, roads should be adequately drained and maintained to control erosion. Drainage facilities may include ditches, water bars, culverts and/or any other measure deemed necessary.

Note: Sec. 2-B and 2-C above apply primarily to Federal lands. If the land is privately owned, these requirements may be varied to comply with the operator-landowner agreement.

### 3. REPORTS:

- A. The following reports shall be filed with the District Engineer within 15 days after the work is completed:
- (1) Five copies of Sundry Report, Form 9-331, giving complete information concerning:
    - (a) Setting of each string of casing. Show size, grade and weight of casing set, size hole, depth set, amount and type of cement used, whether cement circulated, top of cement behind casing if determined, depth of cementing tools if used, casing test method and results, and date work was done. Show spud date on first report submitted.
    - (b) Intervals tested, perforated, acidized, or fractured and results obtained.
  - (2) Four copies of Well Completion Report, Form 9-330. Show formation tops, drill stem test information, completion data, and production tests. Show all oil and gas zones and important water sands under item 37. Data on water sands should include rate of water inflow and elevation to which water rose in hole.
  - (3) Two copies of all electrical and radioactivity logs run.

### 4. DRILLER'S LOG: The following shall be entered in the daily driller's log:

- A. Blowout preventer pressure tests including test pressures and results.
- B. Blowout preventer tests for proper functioning.
- C. Blowout prevention drills conducted.
- D. Casing run, including size, grade, weight and depth set.

- E. How pipe was cemented, including amount of cement, type, whether cement circulated, location of cementing tools, etc.
- F. Waiting on cement time for each casing string.
- G. Casing pressure tests after cementing including test pressure and results.

5. BLOWOUT PREVENTION:

- A. Blowout preventers and related well-control equipment shall be installed, tested, and used in such manner necessary to prevent blowouts.
- B. Ram-type blowout preventers and related control equipment shall be pressure tested with water to the rated working pressure of the stack assembly, with the exception of the annular-type preventer, which may be tested: (a) when installed, (b) before drilling possible abnormally pressured zones, and (c) following repairs that require disconnecting a pressure seal in the assembly.
- C. While drill pipe is in use, ram-type blowout preventers shall be actuated to test proper functioning once each trip, but in no event less than once each day. The annular-type blowout preventer shall be actuated on the drill pipe at least once each week.
- D. Blowout preventers are to have proper rams for the operations being performed. Casing rams are required when running casing.
- E. Blowout preventers are to have handwheels installed.
- F. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
- G. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
- H. Drill string safety valve(s) to fit all pipe in the drill string are to be maintained on the rig floor while drilling operations are in progress.
- I. Blowout prevention drills are to be conducted as necessary to assure that equipment is operational and that each crew is properly trained to carry out emergency duties. All BOP tests and drills are to be recorded in the driller's log.
- J. The maximum pressure to be allowed on blowout preventers during well control operations is to be posted for each casing string.
- K. The characteristics, use, and testing of drilling mud and the conduct of related drilling procedures shall be such as are necessary for well control. Quantities of mud materials sufficient to insure well control shall be maintained, readily accessible for use at all times.



- L. When coming out of the hole with drill pipe, the annulus shall be filled with mud before the mud level drops below 100 feet. The volume of mud required to fill the hole shall be watched, and any time there is an indication of swabbing, or influx of formation fluids, proper blowout prevention precautions must be taken. The mud shall not be circulated and conditioned except on or near bottom, unless well conditions prevent running pipe to bottom.
- M. From the time drilling operations are initiated and until the well is completed or abandoned, a member of the drilling crew or the toolpusher shall maintain rig floor surveillance at all times, unless the well is secured with blowout preventers or cement plugs.

6. MUD PITS:

- A. Mud pits will be constructed so as not to leak, break or allow discharge of liquids. Pits are not to be located in natural drainage. Any plastic material used to line pits must be removed to below ground level before pits are covered.
- B. All unguarded pits containing liquids will be fenced.
- C. Liquids in pits will be allowed to evaporate, or be properly disposed of otherwise, before pits are broken.

7. CASING:

- A. Notify the District Office in sufficient time for a representative to inspect any used casing planned for use in a casing string.
- B. Prior to drilling the plug after cementing, all casing strings shall be pressure tested. Test pressure shall not be less than 600 psi for surface casing, and a minimum of 1,500 psi or 0.2 psi/ft., whichever is greater, for other casing strings. If the pressure declines more than 10 percent in 30 minutes, or if there is other indication of a leak, the casing shall be recemented, repaired, or an additional casing string run, and the casing shall be tested again in the same manner.

8. WAITING ON CEMENT TIME:

- A. After cementing but before commencing any tests, the casing string shall stand cemented under pressure until the cement has reached a compressive strength of at least 500 psi at the shoe, except that in no case shall tests be initiated until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log.

9. DRILLSTEM TESTS:

- A. Estimated amounts of oil and gas recovered and/or produced during drillstem tests are to be shown in the driller's log and reported in accordance with NTL-4.

10. SAFETY:

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Drilling rig engines should have water cooled exhausts.
- C. Rig safety lines are to be installed.
- D. Hard hats must be utilized.

11. ABANDONMENT:

- A. If the well is dry and is to be plugged, approval of the proposed plugging program can be obtained orally. However, oral approval must be confirmed in writing by immediately filing a Notice of Intention to Abandon on form 9-331 in quintuplicate with the District Engineer. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed.
- B. Within 15 days after plugging the well, a Subsequent Report of Abandonment is to be filed on form 9-331 in quintuplicate showing the manner in which the well was plugged, including depths where casing was cut and pulled from, intervals, by depths, where cement plugs were placed, and the date plugging was completed. When all surface restoration work is completed, advise the District Office so that a field inspection of the wellsite can be made.

NAMES AND PHONE NUMBERS OF PERSONNEL  
AVAILABLE FOR CONSULTATION CONCERNING  
DRILLING OPERATIONS AND SURFACE REHABILITATION REQUIREMENTS

U. S. Geological Survey - Oil and Gas Operations

Hobbs District Office: 414 West Taylor  
P. O. Box 1157  
Hobbs, New Mexico 88240

Office Hours: 8:00 a.m. - 4:30 p.m. Phone 505-393-3612  
505-393-5146

Outside Office Hours:

Bernard Moroz Home Phone 505-392-7083

Arthur R. Brown Home Phone 505-392-5642

Bureau of Land Management - Surface Use and Rehabilitation

Roswell District Office: 1717 West Second Street  
P. O. Box 1397  
Roswell, New Mexico 88201

Phone: 505-622-7670

Lea County: Jaime Provencio

Roosevelt County: Tom Hewitt